6.8 Data Network Services (Schedule 3.3 – Appendix 8)

Instructions to Vendors: *Unless specifically noted in the appropriate tables below, Vendor agrees to perform, for the environment (described in Schedule 3.3 – Appendix 8, Section 2), the services and associated roles and responsibilities (as outlined within Schedule 3.3 – Appendix 8, Section 3 Data Network Services Requirements), at the defined service levels (as outlined within Schedule 3.3 – Appendix 8, Section 4). Section 3 is not considered to be all-inclusive. Vendor will be responsible for the complete life-cycle management of these services, unless otherwise noted. Vendor shall clearly indicate in the tables below if it does not accept the requirements defined in Schedule 3.3 – Appendix 8. Commonwealth considers the Vendor to agree to all Schedule 3.3 – Appendix 8 unless identified herein. Vendor should add rows to the tables below as necessary. Absence of issues will constitute agreement for those items not herein addressed, and will be off the table for further negotiation.*

6.8.1 Data Network Solution Overview

Instructions to Vendors: *Provide an overview of the Data Network solution you propose to address the Commonwealth Requirements stated in Schedule 3.3 – Appendix 8. This overview should* ***not be more than two-pages*** *long. Additional details should be provided in Section 11 of this Vendor Proposal Format document.*

The Commonwealth Partner's Vision for the Commonwealth

Over time and in response to individual agency needs, a network infrastructure has evolved within the Commonwealth that has duplication, lacks the flexibility to support and grow with customer requirements, provides inconsistent service levels, and presents increasing risks to secure and continuous operations. At the same time, the Commonwealth's investment in new network technology and technical staff development has not kept pace with rapidly changing needs and End-User service expectations. As the Commonwealth drives to a consolidated data center architecture and operational model, a high-quality, reliable, and cost-effective network infrastructure becomes paramount.

The Commonwealth Partners envision a Data Network environment that closely aligns with both agency-specific and enterprise-wide applications, intelligently leverages the scale of the Commonwealth for cost-effective connectivity, consistently delivers superior levels of service, and provides a challenging development opportunity for network staff. Our extensive experience with network development and operations within large state governments and enterprises allow us to rapidly implement the data network environment take-over and transition that the Commonwealth is seeking, while reducing operating costs and raising critical service levels to the customer.

Solution Description

The proposed Data Networking solution is designed to meet the following key objectives:

- Consolidate the wide range of disparate links and networks currently supporting Commonwealth agencies to achieve operational efficiencies and simplified management
- Standardize and simplify the service offerings for better alignment with agency needs and ease of administration
- Take advantage of advanced technology, such as Metropolitan Switched Ethernet and Multi-Protocol Label Switching (MPLS), to improve functionality, throughput and performance, to support emerging applications, and to meet or exceed required Service Levels
- Leverage skills and knowledge of current VITA Data Network staff by effectively integrating them into the new Vendor/Partnership organization

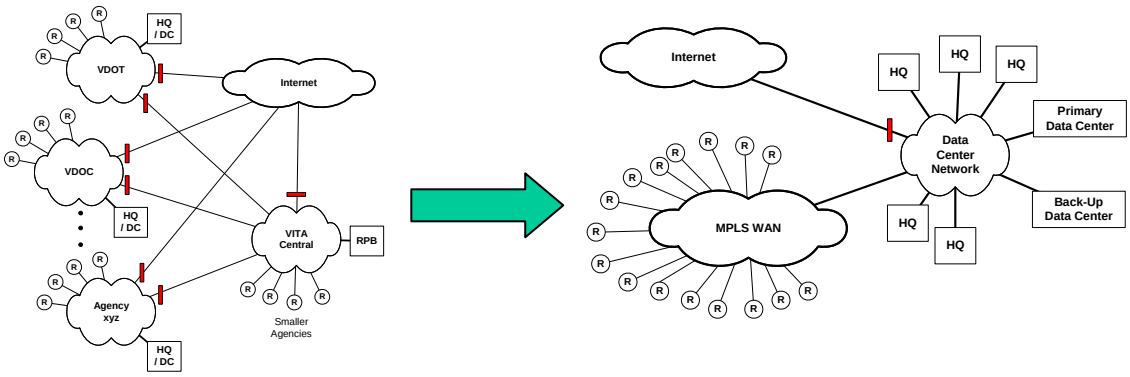

Figure 6.8 – 1. Data Network Evolution Concept: From multiple disparate and duplicative networks to a common, flexible, scalable, and manageable infrastructure

Key elements of the Commonwealth Partners' Data Network Solution include:

- Re-architect Wide Area Network (WAN) to: reduce duplicate/parallel agency facilities (consolidating circuits and network access hardware for agencies and locations with duplicate capacity), improve circuit utilization (through close tracking and optimizing circuit capacity relative to traffic demand), leverage regional concentration potential (e.g., by establishing network hub points within carrier service areas or LATAs), provide higher bandwidth/performance where needed (by deploying flexible and scalable bandwidth options, such as Metropolitan Switched Ethernet), facilitate end-to-end management (by integrating network operations performance monitoring through a centralized Network Operations Center or NOC)
- Construct high-capacity, high-availability Metropolitan Area Network (MAN) in Richmond area (based on high-availability SONET Ring technology and high-capacity Metropolitan Switched Ethernet/TLS connectivity from major agency sites) to simplify and consolidate existing agency-specific circuit configurations, achieve unit cost reduction, provide critical bandwidth in support of Primary Data Center access and migration of current Data Centers and applications to the central site (the MAN will be configured and rolled out to accommodate the transitional bandwidth peak demands that arise from application and server migrations planned in connection with the data center consolidation objectives)
- Consolidate/streamline Internet access for additional circuit and management economies, re-routing current multitude of Internet access points through a few major connection points, including the Primary Data Center
- In concert with new Data Center build-out, consolidate and standardize VPN-based remote access capabilities under a common platform and processes, with consistently strong security
- Extend network coverage in a timely manner to critical locations such as the new Service Center/Help Desk in far-western Virginia
- Upgrade Local Area Networks (LAN) technology and architecture, to bring agency networks up to a common level of functionality, manageability, and standards compliance, through selective replacement and on-going refresh process
- Provide a backbone and access network capability able to cost-effectively support IP-based voice traffic and enable IP Telephony applications
- Organize and develop the skills and capabilities of data network personnel through adoption of consistent operational and management processes, standardized technology training, implementation of a standard network service portfolio for Commonwealth customers (service delivery model)

The Commonwealth Partners will proceed as soon as possible with the MAN construction and selective WAN re-architecting coordinated with VITA, in order to:

- Realize circuit economies by consolidating traffic over parallel links and reconfiguring circuits to hub into regional concentration points, capitalizing on more favorable service provider tariffs
- Provide capacity in advance of Data Center and application/data migration scheduled milestones, as well as the rollout of planned Service Center/Help Desk facilities, leveraging high-capacity service offerings that can be scaled up or down quickly to meet evolving application traffic demands
- Integrate the network environment with a central NOC to provide the visibility and control required for consistently meeting required SLAs

Deliver new, standardized service portfolio based largely on flat unit-based parameters

Benefits/ Future State

The Commonwealth and its End-Users will receive tangible benefits from this Data Network solution, including the following:

- Potential cost savings from improved network capacity utilization and tariff optimization of over 15% in major portions of the network, which translate into reduced unit-cost of service to the agencies
- Consistent and improved Service Levels, based on comprehensive use of monitoring and reporting tools and processes, centered around the NOC
- Network connectivity and capacity that can be deployed quickly, along with effective capacity planning, to meet critical application needs and unusual traffic loads in accordance with an "on demand" service model
- Network modernization/re-engineering and "service provider delivery model" provides attractive development path for absorbed staff

6.8.2 Data Network Service Environment Acceptance and Exceptions

Vendor shall reference and provide detailed accepted and/or proposed service environment components as attachments to the proposal where required and as indicated in Schedule 3.3 – Appendix 8, Section 2.

☑ Check - Vendor agrees with Schedule 3.3 – Appendix 8, Section 2, except for the elements listed in the table below.

Table 44. Data Network Service Environment Issues

Redacted

6.8.3 Data Network Services Requirements Acceptance and Exceptions

☑ Check - Vendor agrees with Schedule 3.3 – Appendix 8, Section 3, except for the elements listed in the table below.

Redacted

Table 45. Data Network Services Requirements Issues

6.8.4 Data Network Service Management Acceptance and Exceptions

☑ Check - Vendor agrees with Schedule 3.3 – Appendix 8, Section 4, except for the elements listed in the table below.

Table 46. Data Network Service Management Issues

Redacted

6.8.5 Data Network Management Tools

Describe the automated tools used in the delivery of this service in the table below.

Table 47. Data Network Management Tools

Redacted

6.8.6 Vendor Additional Comments relative to service provisioning for Schedule 3.3 – Appendix 8

Please refer to section 11.3.9 for additional description of our Data Networking services.